US Army Corps
of Engineers
Alaska District

Regulatory Branch (1145b)
3437 Airport Way
Suite 206
Fairbanks, Alaska 99709-4777

Public Notice of Application for Permit

PUBLIC NOTICE DATE: March 8, 2006

EXPIRATION DATE: April 6, 2006

REFERENCE NUMBER: POA-2006-364-4

WATERWAY NUMBER: Chatanika River

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached plan.

APPLICANT: Mr. Bill Beistline, Post Office Box 80525, Fairbanks, Alaska 99708

LOCATION: Section 33, T. 5 North, R. 3 East Fairbanks Meridian, Latitude 64.221° N., Longitude -147.160° W.

WORK: The applicant proposes to discharge approximately 181 cubic yards of fill material into the Chatanika River for the construction of four stream barbs. The applicant also proposes to temporarily place approximately 92 cubic yards of fill material into the Chatanika River for the construction of four temporary construction pads. All work would be completed in accordance with the attached plans, sheets 1 - 11, dated 03/07/2006.

PURPOSE: The purpose of the proposed project is to stabilize the streambank to prevent the river from damaging an access road to a future building site.

ADDITIONAL INFORMATION: Four stream barbs would be constructed along the North bank of the Chatanika River. Stream Barbs are rock riprap jetties that extend from the shore out into the river at an upstream angle to slow river erosion. The barbs would rise approximately 1.3 feet above the streambed, extend into the stream approximately 31 - 35 feet, and angle approximately 60 to 75 degrees upstream. During the construction of the barbs, the river bottom would be excavated to a depth of three feet and backfilled with rock riprap to key the stream barb into the river bottom. The intent of the barbs is to reduce the potential for bank erosion by redirecting the stream flow away from the bank and reducing the sheer stress against the bank during high flow events.

Temporary pads made of river rock would be constructed to facilitate barb construction (Sheet 9). Each 17′ x 12′ x 3′ temporary pad would require approximately 23 cubic yards of fill. No equipment would be allowed to operate in the water.

Live willow staking and fascine planting would be incorporated into the project as additional erosion control and for increased habitat value. The willow staking would extend from approximately one foot above ordinary high water to a distance of 15 feet beyond the top of the bank and from barb one to barb four. The live fascine planting would extend from the downstream side of Barb one to the upstream side of barb four, six to twelve inches above ordinary high water. See sheets 10 and 11 for details.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. There are no listed or eligible properties in the vicinity of the worksite. Consultation of the AHRS constitutes the extent of cultural resource investigations by the District Engineer at this time, and he is otherwise unaware of the presence of such resources. This application is being coordinated with the State Historic Preservation Office (SHPO). Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between the Federal government and Federally recognized Tribes. This notice invites participation by agencies, Tribes, and members of the public in the Federal decision-making process. In addition, Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Engineer during the public comment period.

ENDANGERED SPECIES:
No threatened or endangered species are known to use the project area. Preliminarily, the described activity will not affect threatened or endangered species, or their critical habitat designated as endangered or threatened, under the Endangered Species Act of 1973 (87 Stat. 844). This application is being coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to the Magnuson Stevens Fishery Conservation and Management Act of 1996 (MSFCMA), 16 U.S.C. et seq and associated federal regulations found at 50 CFR 600 Subpart K. The Alaska District includes areas of EFH as Fishery Management Plans. We have reviewed the January 20, 1999, North Pacific Fishery Management Council's Environmental Assessment to locate EFH area as identified by the National Marine Fisheries Service (NMFS). We have determined that the described activity may adversely affect EFH. The proposed work may affect approximately 0.5 acres of EFH for juvenile/adult salmon. This Public Notice initiates consultation requirements with the NMFS under the MSFCMA. We have insufficient information at this time to assess the cumulative effects of the proposed work on EFH, but cumulative effects will be considered in our final assessment of the described work. Any conservation recommendations regarding EFH for federally managed fish will also be considered in our final assessment of the described work. This proposed project may also adversely affect associated species such as major prey or predator species which are not covered by Fishery Management Plans.

SPECIAL AREA DESIGNATION: None.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Benjamin Soiseth at the Fairbanks Field Office, 907-474-2166, or by email at Benjamin.N.Soiseth@poa02.usace.army.mil if further information is desired concerning this notice.

AUTHORITY: This permit will be issued or denied under the following authorities:

(X) Perform work in or affecting navigable waters of the United States - Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).

(X) Discharge dredged or fill material into waters of the United States - Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

A plan and Notice of Application for State Water Quality Certification are attached to this Public Notice.

District Engineer
U.S. Army, Corps of Engineers

Attachments

FRANK H. MURKOWSKI, GOVERNOR

STATE OF ALASKA

OFFICE OF THE GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER
Non-Point Source Water Pollution Control Program
401 Certification Program

NOTICE OF APPLICATION
FOR
STATE WATER QUALITY CERTIFICATION

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. By agreement between the U.S. Army Corps of Engineers and the Department of Environmental Conservation, application for a Department of the Army permit to discharge dredged or fill material into navigable waters under Section 404 of the Clean Water Act also may serve as application for State Water Quality Certification.

Notice is hereby given that the application for a Department of the Army Permit described in the Corps of Engineers' Public Notice No. **POA 2006 364 4, Chatanika River** serves as application for a short-term variance of State Water Quality Certification from the Department of Environmental Conservation, as provided in Section 401 of the Clean Water Act of 1977 (PL 95-217).

The Department will review the proposed activity to ensure that, except for an allowed, short-term variance, any discharge to waters of the United States resulting from the referenced project will comply with the Clean Water Act of 1977 (PL95-217), the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

Any person desiring to comment on the project with respect to Water Quality Certification may submit written comments within 30 days of the date of the Corps of Engineer's Public Notice to:

Department of Environmental Conservation
WQM/401 Certification
555 Cordova Street
Anchorage, Alaska 99501-2617
Telephone: (907) 269-7564
FAX: (907) 269-7508

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

DESIGN REPORT

(NEM Title 210, Part 511, Subpart B, Section 511.11(b))

JOB : NRCS PS 580, Streambank and Shoreline Protection
PROJECT : Stream Barb flow redirection project
LOCATION : Chatanika River, near Mile 45 Steese Hwy.
AUTHORITY: Wildlife Habitat Improvement Program
JOB CLASS : IV

SUMMARY:
This design is for the construction of four stream barbs on the right (north) bank of the Chatanika River near mile 43 of the Steese Highway, on property owned by Bill Beistline. A live willow and fascine planting is also prescribed to increase bank stability as well as increase the habitat value of the project.

DESCRIPTION OF PROJECT:
The Project is located on the Chatanika River just upstream from McKay Creek at approximately Mile 43 of the Steese Highway, in Section 33, T5N, R2E, F.M. Four stream barbs will be constructed along the right (north) bank of the Chatanika River. The Barbs will be constructed from rock riprap and will vary from 31 to 36 feet in length. Live willow staking and fascine planting will be incorporated into the design as additional erosion control and increased habitat value.

DESIGN OBJECTIVE:
The primary objective of this project is to stabilize the streambank to prevent the river from damaging an access road to a future building site.

DESIGN REFERENCES:

NRCS Practice Standard, PS-580, Streambank and Shoreline Protection
NRCS Engineering Field Handbook, Chapter 16, Streambank and Shoreline Protection
NRCS Engineering Bulletin No, 210-14, Construction and Materials Specifications
NRCS Idaho Technical Note no. 12, Design of Stream Barbs
Minnesota TR-3, Loose Riprap Protection
USGS Water Resources Investigations Report 03-4188, Estimating the Magnitude and Frequency of Peak Streamflows for Ungaged Sites on Steams in Alaska and Conterminous Basins in Canada

FIELD SURVEYS:

The design survey was performed in October 2004 by Jim Helm (DC) and Jeff Oatley (CE) both of the Fairbanks Field Office. The horizontal and vertical controls are based on a TBM set for this survey. The elevation of the TBM was arbitrarily set at 100.00. The survey was performed using a Topcon Total Station.

DESIGN:

Hydrology

The Bankfull Discharge for the site was estimated to be approximately 850 cfs. This was done using field indicators such as vegetation limits and bar top elevations to estimate the water surface elevation at the bankfull condition. A normal depth computation at this water surface elevation was performed using a cross section from the field survey. Manning's roughness was estimated to be 0.045.

This value was then checked using the USGS regression equations for ungaged sites (see references), to calculate the 2-year return period peak flood-flow rate. The value obtained was 815 cfs, which seems reasonably close to the initial normal depth estimate.

Hydraulics

Average velocities for the 2-year flood flow are estimated to be only 2.0 fps. Maximum velocities are likely to be 2 to 3 times this value.

The channel slope at this site, estimated from USGS contour maps, is 0.0023 ft/ft. This results in a nominal tractive shear stress of 0.19 pounds per square foot, at bankfull flow.

As designed, the stream barbs will likely capture 20 to 30 percent of the flow and direct it away from the bank. Acting like a weir, the barbs will accelerate the flow and generate a hydraulic jump. There will be scour at the tip and on the downstream side of the each barb.

Technical Note 12 was used in the design of the stream barbs. The design parameters are generally on the lower end of the values recommended in the technical note. This was done because a strong hydraulic response is not necessary to stabilize the bank. The project is being installed in a fairly tight bend on a relatively small channel. The intention of the barbs is to direct a portion of the energy away from the bank, once that is accomplished, vegetation can be established that will further stabilize the bank as well as provide habitat benefits.

Structural Considerations

The rock gradation specified will adequately resist the tractive forces that will be applied to the barbs. The barbs will be keyed into the bank to prevent flanking, and will be keyed into the bed to prevent failure due to undermining.

ENVIRONMENTAL CONSIDERATIONS:

The permitting process will be essential in determining the timeframe for installation of this project. Since this waterway is a spawning ground for some anadromous species, sediment input into the river will need to be minimized. No equipment will be allowed to operate in the river. A temporary pad made of river rock has been proposed to facilitate barb construction. Permits necessary to construct the project may stipulate other actions on the part of the contractor required to ensure minimal environmental impact.

OPERATION AND MAINTENANCE PLAN:

A site specific operation and maintenance plan has been prepared for this project.

INSPECTION PLAN:

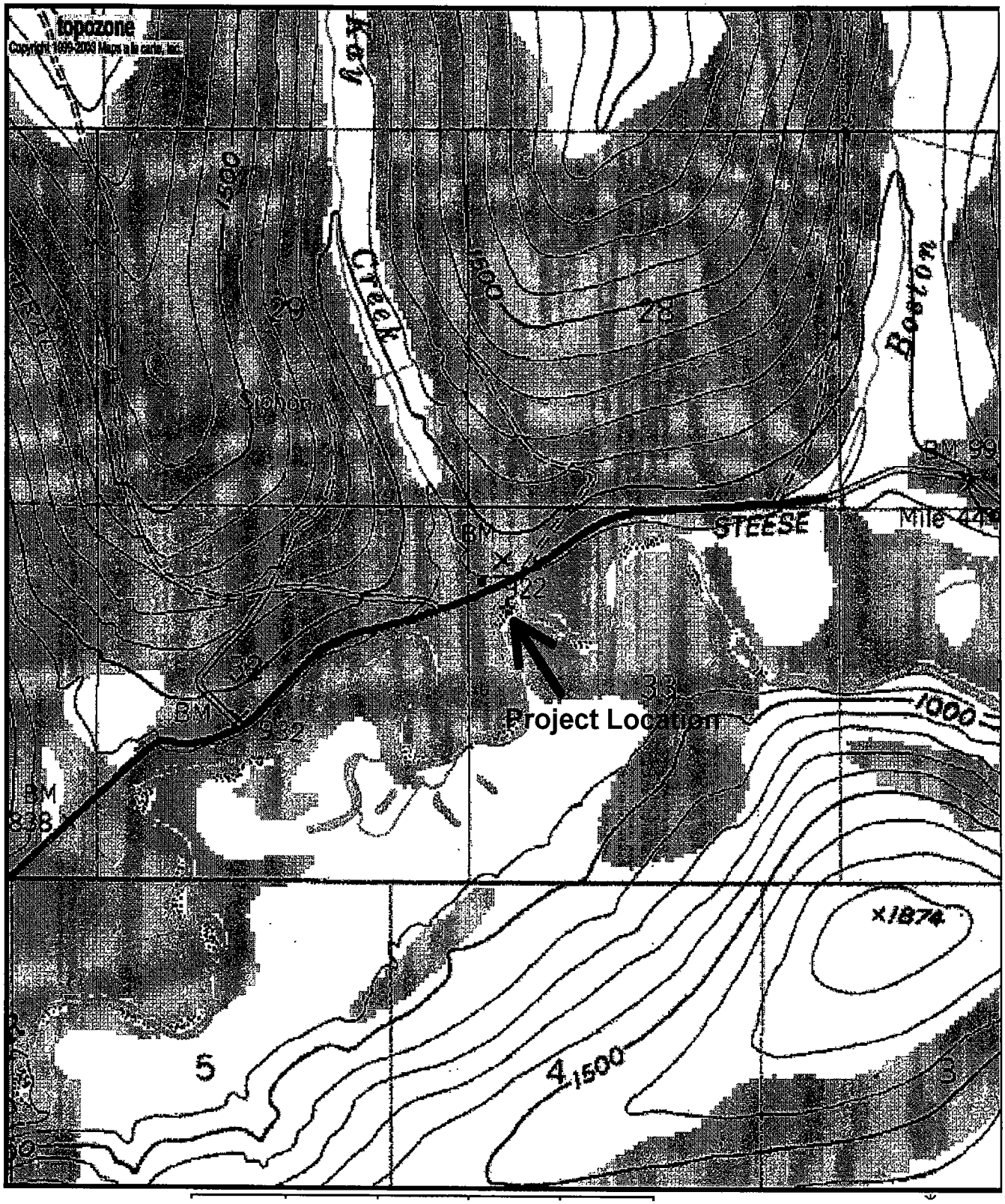
Construction of stream barbs is inherently difficult, and field adjustments are often necessary. For this reason, an NRCS engineer, or other qualified staff, will serve as a construction inspector during the installation of this project.

NRCS will have personnel on site as much as possible during construction. At a minimum, an NRCS representative will be on site once per day to answer any questions the contractor(s)/sponsor(s) might have. In addition, the contractor(s)/sponsor(s) will be given the NRCS field office phone number and staff will be available to answer questions over the phone or visit the site within a reasonable period of time.

PREPARED BY: _____ **DATE:** 23 Aug 05

REVIEWED BY: _____ **DATE:** 30 Aug 05

APPROVED BY: _____ **DATE:** 30 Aug 05



Map center is 65.2209°N, 147.1592°W (WGS84/NAD83)
Livengood A-1 quadrangle
Projection is UTM Zone 6 NAD83 Datum

Project Location
POA-2006-364-4
03/07/2006
Sheet 4 of 11

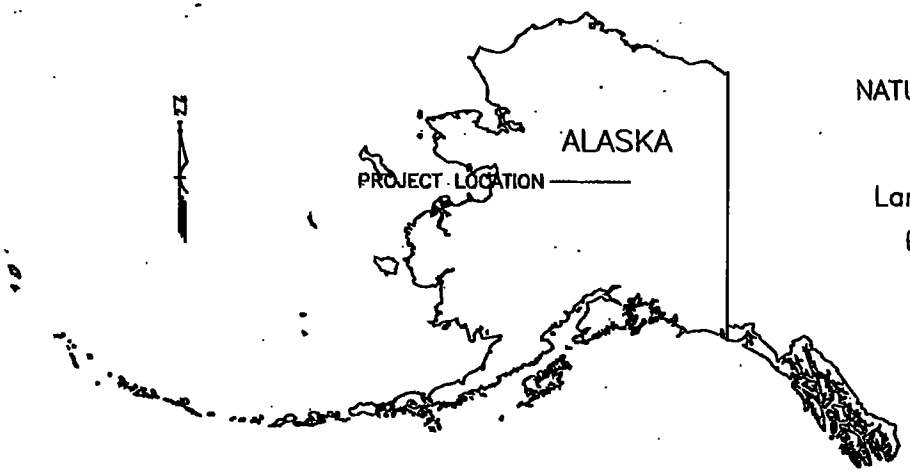
Bill Beistline Streambank Stabilization Project
Chatanika River near Mile 43 Steese Highway

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE
Job Class IV

Landowner Acceptance: _____

Date of Acceptance: _____

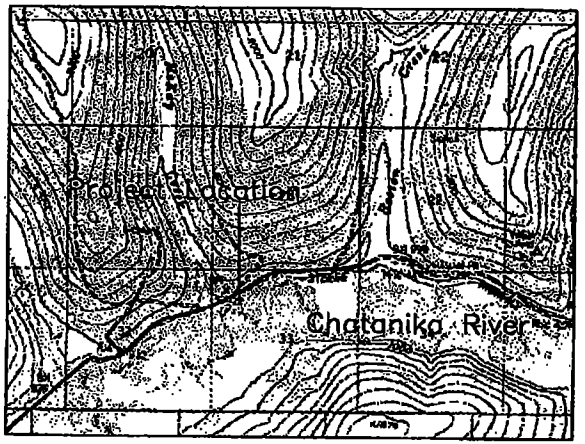


INDEX OF DRAWINGS

1) Cover Sheet
2) Project Plan View
3) Barb Details
4) Barb Cross Sections
5) Construction Pad Details
6) Willow Planting
7) Fascine Details

GENERAL NOTES

1. Landowner/Sponsor is responsible for obtaining all required permits.
2. No representation is made as to the existence or nonexistence of any utilities, public or private. Absence of utilities on these drawings is not assurance that no utilities are present. If buried utilities are shown, the location and depth are approximate. The exact location and depth of any utility must be determined by the utility company prior to any excavation.



VICINITY MAP

NOT TO SCALE

Cover Sheet
Bill Beistline Streambank Stabilization Project
Chatanika River Near Mile 43 Steese Highway

NRCS Natural Resources Conservation Service
United States Department of Agriculture

File Name: Beistline.dwg
Drawing No.
Sheet 1 of 7

Vicinity Map
POA-2006-364-4
03/07/2006
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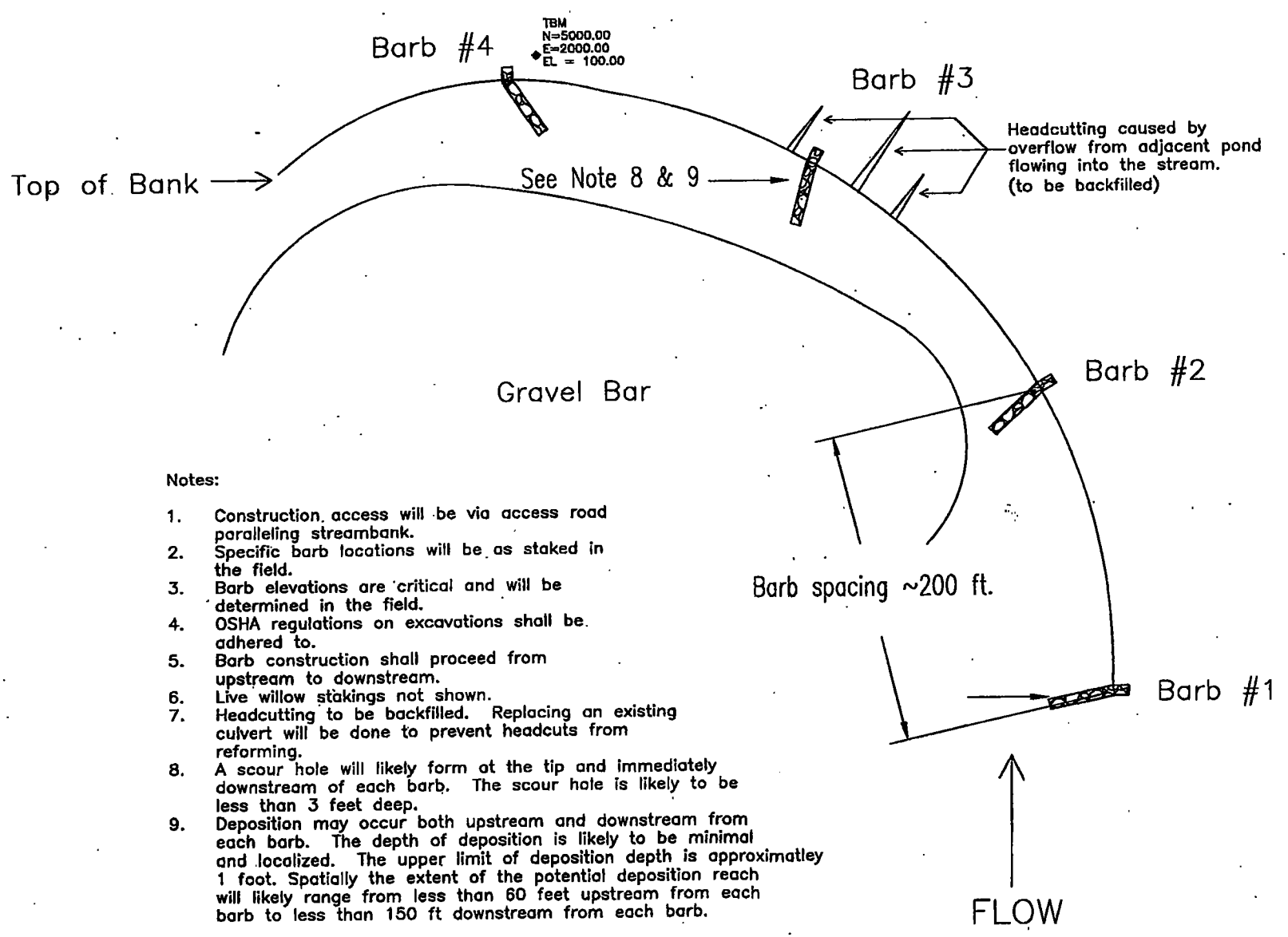

Notes:

1. Construction access will be via access road paralleling streambank.
2. Specific barb locations will be as staked in the field.
3. Barb elevations are critical and will be determined in the field.
4. OSHA regulations on excavations shall be adhered to.
5. Barb construction shall proceed from upstream to downstream.
6. Live willow stakings not shown.
7. Headcutting to be backfilled. Replacing an existing culvert will be done to prevent headcuts from reforming.
8. A scour hole will likely form at the tip and immediately downstream of each barb. The scour hole is likely to be less than 3 feet deep.
9. Deposition may occur both upstream and downstream from each barb. The depth of deposition is likely to be minimal and localized. The upper limit of deposition depth is approximatley 1 foot. Spatially the extent of the potential deposition reach will likely range from less than 60 feet upstream from each barb to less than 150 ft downstream from each barb.

Project Plan View
Bill Beistline Streambank Stabilization Project
Chatanika River Near Mile 43 Steese Highway

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File Name: beist5ne.dwg
Drawing No.
Sheet 2 of 7

Plan View
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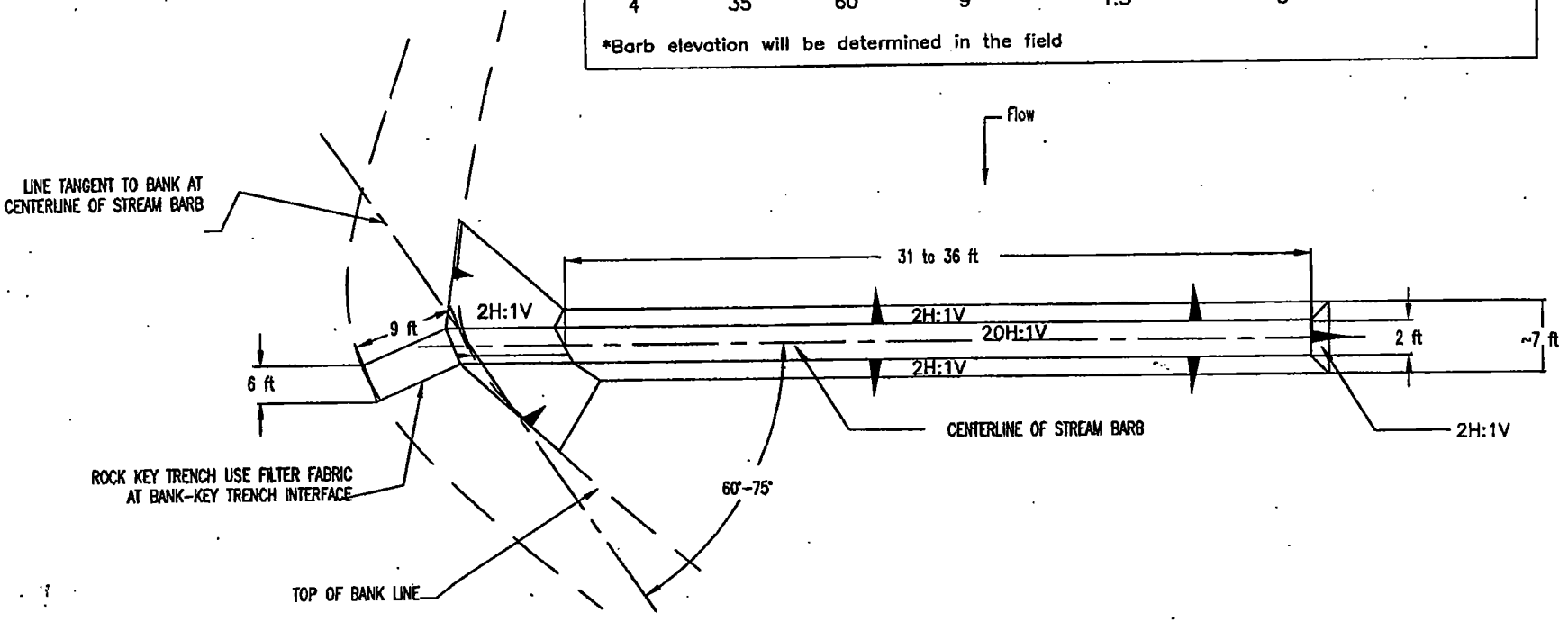
03/07/2006
Sheet 6 of 11

Barb #	Length	Barb Angle	Key Length	Approx. Height*	Bed Key Depth	Footprint
1	31'	75	9'	1.3'	3'	290 ft^2
2	31'	75	9'	1.3'	3'	290 ft^2
3	31'	75	9'	1.3'	3'	290 ft^2
4	35'	60	9'	1.3'	3'	322 ft^2

*Barb elevation will be determined in the field



PLAN VIEW OF STREAM BARB
Not To Scale

LEGEND

-DIRECTION OF DOWNWARD SLOPE

Barb Details
Bill Beistline Streambank Stabilization Project
Chatanika River Near Mile 43 Steese Highway

NRCS Natural Resources Conservation Service United States Department of Agriculture

File Name Beistline.dwg
Drawing No.
Sheet 3 of 7

Barb Details
POA-2006-364-4
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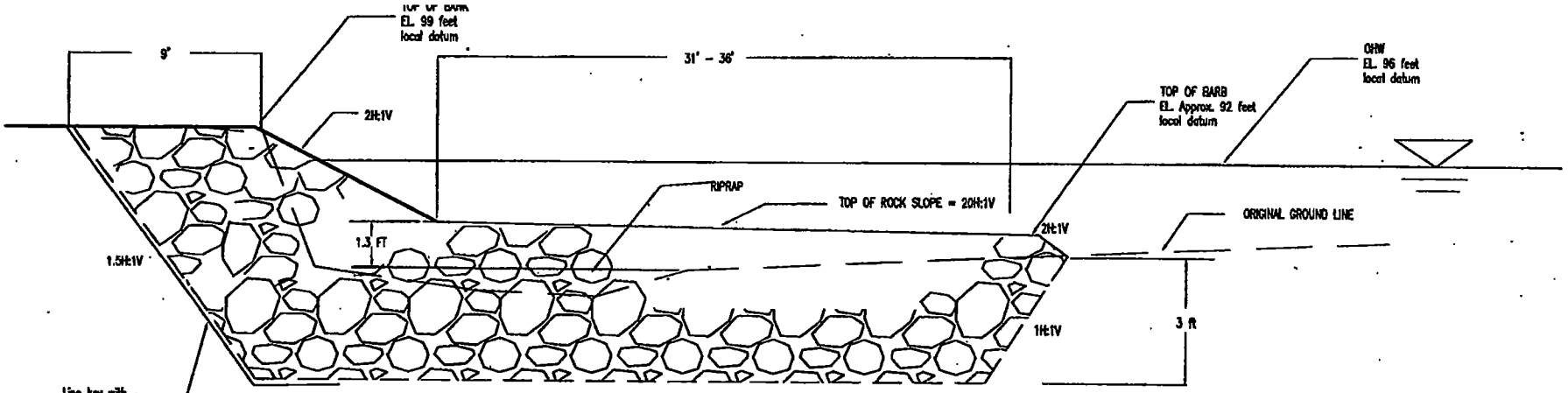
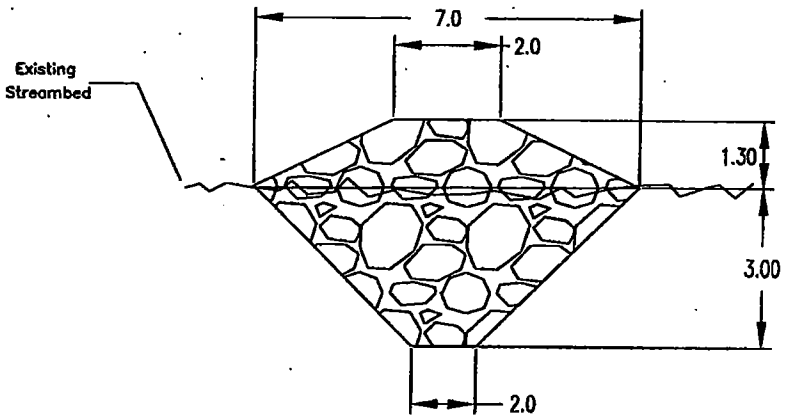


TYPICAL SECTION, CENTERLINE OF STREAM BARB

NOT TO SCALE



Typical Streambarb Cross Section

NOT TO SCALE

Rock Gradation for Barb & Key

% Passing (inches)	Lower Limit of Gradation (inches)	Upper Limit of Gradation (inches)
100	13	18
85	11	16
50	9	14
15	2	5

*Minimum specific gravity of rock to be 2.55

Barb Cross Sections

Bill Beistline Streambank Stabilization project

Chatanika River Near Mile 43 Steese Highway

NRCS Natural Resources Conservation Service

File Name: Beistline.dwg

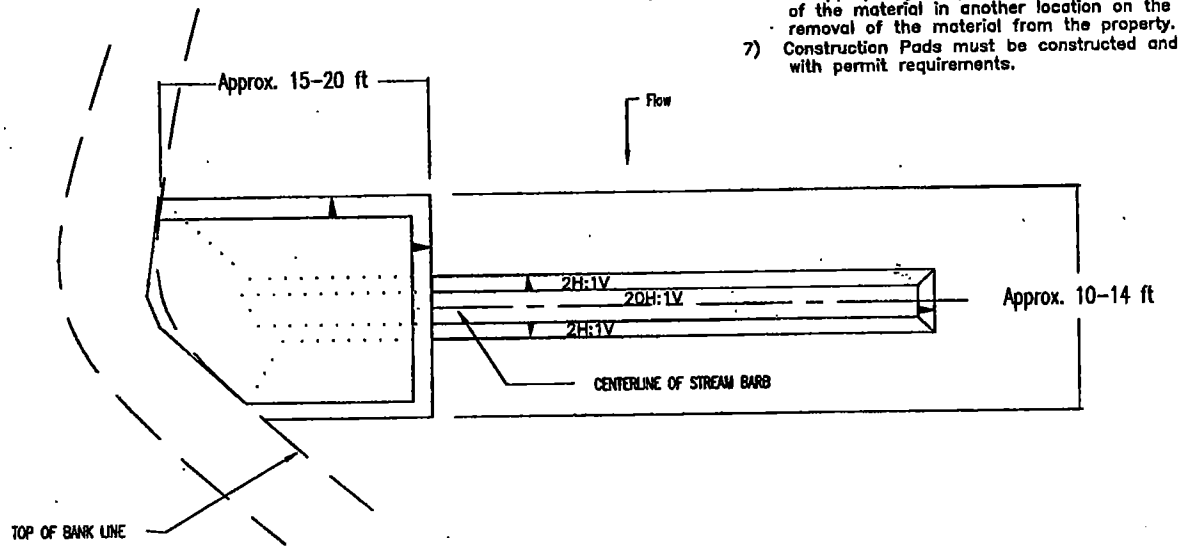
Drawing No.

Sheet 4 of 7

Barb Cross Section
POA-2006-364-4
03/07/2006
Sheet 8 of 11

Notes:

1) The temporary construction pad will be made from clean river rock.
2) The pad height will vary between approximately 2 and 4 feet depending on water level and local bed topography
3) Each temporary pad will have a footprint of approximately 210 square feet and will require 23 yards of material to construct.
4) Prior to completion of the barb the temporary pad will be removed.
5) If the same material will be used for multiple pads care must be taken to insure that no over-excavation occurs will removing the material from the channel.
6) Upon completion of the project excess pad material will be of appropriatly away from the project site. This may include use of the material in another location on the same property, or removal of the material from the property.
7) Construction Pads must be constructed and removed in accordance with permit requirements.



PLAN VIEW OF STREAM BARB CONSTRUCTION PAD
Not To Scale

LEGEND

► -DIRECTION OF DOWNWARD SLOPE

Construction Pad Details
Bill Beistline Streambank Stabilization Project
Chatanika River Near McKay Creek

NRCS Natural Resources Conservation Service
United States Department of Agriculture

File Name: Beistline.dwg
Drawing No.
Sheet 5 of 7

Temporary Pad Details
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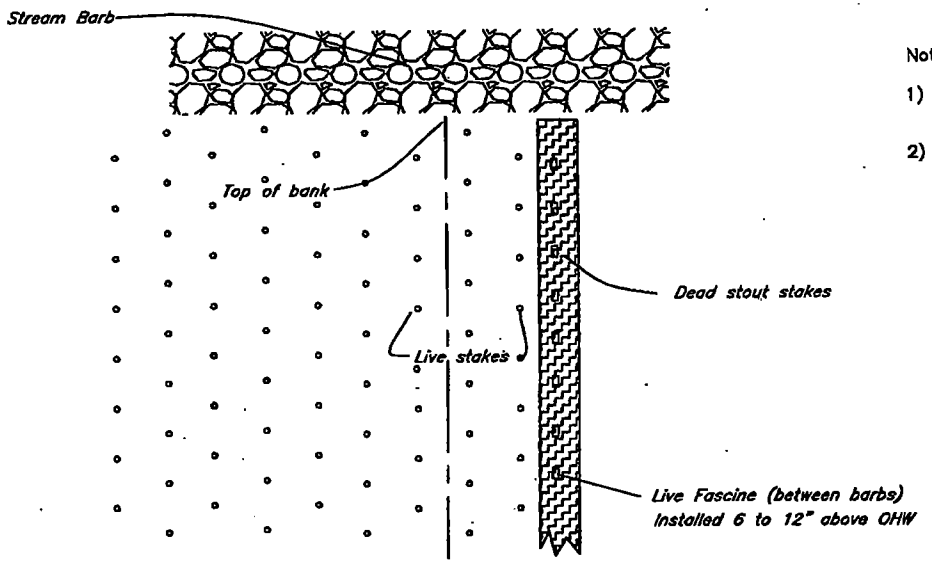
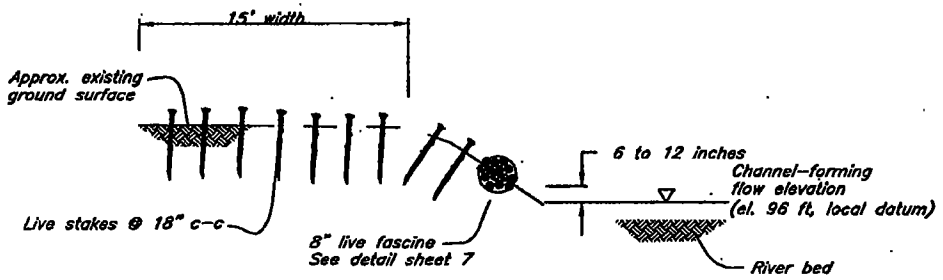


PLAN DETAIL
Not to Scale

Notes:

1) The willow staking will extend from approximately 1 foot above OHW to a distance 15 feet beyond the top of bank, and from barb 1 to barb 4.
2) The live fascine planting will extend from the downstream side of Barb 1 to the upstream side of Barb 4.



TYPICAL CROSS-SECTION
Not to Scale

Willow Planting
Bill Beistline Streambank Stabilization Project
Chatanika River Near McKay Creek

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File Name
Beistline.dwg
Drawing No.

Sheet 6 of 7

Willow Planting
POA-2006-364-4
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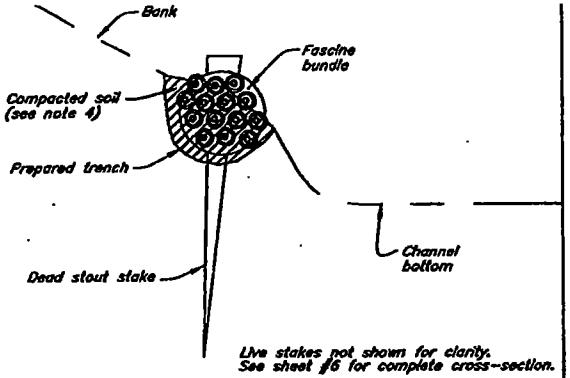


Live stakes not shown for clarity. See sheet #6 for complete cross-section.

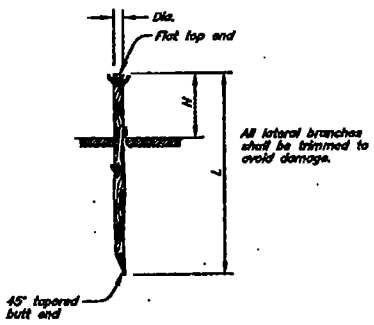
FASCINE CROSS SECTION

FASCINE DIMENSIONS

Species: Felt leaf willow, Sand bar willow

Dia. = 7 min (in) 9 max (in)

Number of rows = 1



LIVE STAKE DETAIL

PLANT DIMENSIONS

Species: Felt leaf willow, Sand bar willow

Dia. = 1 min (in) 2.5 max (in)

H = 2 min (in) 4 max (in)

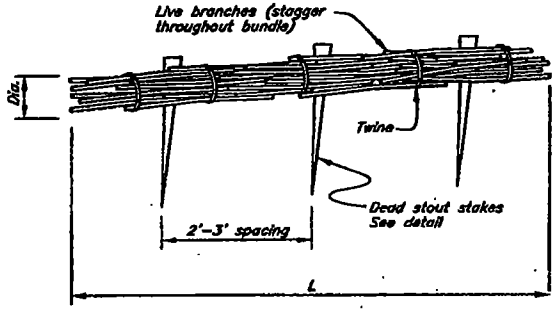
L = 30 min (in) 60 max (in)

S_R (row spacing) = 1.5 (ft)

S_P (plant spacing) = 1.5 (ft)

Number of rows = Varies

Drawing not to scale. Standardized drawing must be adopted to the specific site.

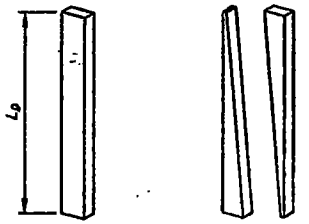


FASCINE BUNDLE DETAIL

GENERAL NOTES

1. Woody material shall be 1/2 to 1 1/2 inches in diameter and not less than 4 feet in length (L).
2. Fascine bundles shall be tied with untreated twine every 1 to 2 feet.
3. The plant material should be dormant, stripped of leaves and irrigated.
4. Place and firmly compact soil over and around fascine leaving approximately 10% of upper branches exposed.

FASCINE DETAIL



Dead Stout Stakes for Fascine:

Min. Length, L_D = 24 in.

Max. Length, L_D = 36 in.

DEAD STOUT STAKES

Drawing not to scale. Standardized drawing must be adopted to the specific site.

Designed: JO 12 Jul

Drawn: JO 12 Jul

Checked:

Approved:

Title:

Fascine Details

Bill Beistline Streambank Stabilization Project

Chatanika River Near McKay Creek

NRCS Natural Resources Conservation Service, United States Department of Agriculture

File Name: Beistline.dwg

Drawing No.

Sheet 7 of 7

Fascine Details
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